

What is claimed is:

1. A compact disc printer comprising:
 - a movable tray to hold a compact disc for printing upon by the printer;
 - at least one clamping finger movably attached to the tray and adapted to selectively engage an outer periphery of the compact disc; and
 - a pair of studs protruding from a surface of the tray for engaging a periphery of a hole passing through a center of the compact disc when the at least one clamping finger engages the outer periphery of the compact disc to clamp the compact disc between the at least one clamping finger and the pair of studs.
2. The compact disc printer of claim 1, wherein the at least one clamping finger comprises an extension for indicating when the compact disc is clamped between the at least one clamping finger and the pair of studs.
3. The compact disc printer of claim 1, and further comprising a spring connected between the at least one clamping finger and the tray for biasing the at least one finger against the outer periphery of the compact disc during clamping.
4. The compact disc printer of claim 1, and further comprising a sensor disposed on a carriage of the printer, the carriage adapted to move an ink jet cartridge attached thereto across the compact disc to deposit an image on the compact disc.
5. The compact disc printer of claim 1, wherein the at least one clamping finger is positioned to push the compact disc toward the pair of studs.

6. The compact disc printer of claim 1, and further comprising an adaptor adapted to be disposed between the at least one clamping finger and the outer periphery of the compact disc, wherein the at least one clamping finger is further adapted to selectively engage the adaptor to force the adaptor against the outer periphery of the compact disc so as to force the periphery of the hole passing through a center of the compact disc against the studs.
7. A compact disc printer comprising:
 - a movable tray to hold a compact disc for printing upon by the printer;
 - a clamping assembly comprising:
 - a first shaft rotatably attached to the tray;
 - a spring connected between the first shaft and the tray;
 - at least one clamping finger mounted on the first shaft;
 - a second shaft rotatably attached to the tray; and
 - a link movably connected between the first and second shafts; and
 - a pair of studs protruding from a surface of the tray for engaging a periphery of a hole passing through a center of the compact disc when the at least one clamping finger engages an outer periphery of the compact disc to clamp the compact disc between the at least one clamping finger and the pair of studs;

wherein the clamping finger engages the outer periphery of the compact disc in response to rotation of the second shaft.
8. The compact disc printer of claim 7, and further comprising a sensor disposed on a carriage of the printer, the carriage adapted to move an ink jet cartridge attached thereto across the compact disc to deposit an image on the compact disc.

9. The compact disc printer of claim 7, wherein the at least one clamping finger is positioned to push the compact disc toward the pair of studs.
10. The compact disc printer of claim 7, wherein the at least one clamping finger comprises an extension for indicating when the compact disc is clamped between the at least one clamping finger and the pair of studs.
11. The compact disc printer of claim 7, and further comprising a first lug protruding from a stationary surface of the printer for engaging a first actuation arm connected to the second shaft for causing the second shaft to rotate as the tray moves past the first lug.
12. The compact disc printer of claim 11, and further comprising a second lug protruding from the stationary surface of the printer for engaging a second actuation arm connected to the second shaft for causing the second shaft to rotate in an opposite direction as the tray moves in an opposite direction past the second lug, thereby causing the link to rotate the first shaft in an opposite direction, thereby rotating the at least one clamping finger out of engagement with the outer periphery of the compact disc.
13. A method of clamping a compact disc to a printer, comprising:
 - positioning the compact disc on a surface of a movable tray of the printer so that a pair of studs protruding from the surface of the tray extend into a hole passing through a center of the compact disc; and

moving at least one clamping finger into engagement with an outer periphery of the compact disc so as to push a periphery of the hole passing through the center of the compact disc against the pair of studs.

14. The method of claim 13, wherein moving at least one clamping finger is in response to moving the tray into the printer.

15. The method of claim 13, wherein moving at least one clamping finger further comprises:

moving the tray into the printer;

as the tray is moving, engaging a lug protruding from a stationary surface of the printer with an actuator arm connected to a first shaft rotatably attached to the tray as the tray moves past the lug, wherein the lug rotates the first shaft; and

imparting the rotation of the first shaft to a second shaft via a link movably connected between the first shaft and the second shaft, wherein the second shaft is rotatably attached to the tray and wherein the second shaft is connected to the at least one clamping finger so that the rotation of the second shaft rotates the at least one clamping finger.

16. The method of claim 13, and further comprising biasing the at least one finger against the outer periphery of the compact disc during clamping.

17. A method of clamping a compact disc to a printer, comprising:

positioning the compact disc on a surface of a movable tray of the printer so that a pair of studs protruding from the surface of the tray extend into a hole passing through a center of the compact disc;

moving at least one clamping finger into engagement with an outer periphery of the compact disc so as to push a periphery of the hole passing through the center of the compact disc against the pair of studs; and verifying clamping of the compact disc.

18. The method of claim 17, wherein verifying clamping of the compact disc comprises reflecting a beam of light off a surface of the at least one clamping finger.

19. A method of operating a compact disc printer, comprising:
emitting a beam of light onto a predetermined point on a movable tray of the printer from a sensor disposed on a carriage of the printer;
indicating that the compact disc is clamped to the tray when a surface of a clamping finger coincides with the point and reflects the light back to the sensor, wherein when the clamping finger coincides with the point, the clamping finger is in engagement with an outer periphery of the compact disc; and
indicating a clamping error when the surface of a clamping finger does not coincide with the point and the light is not reflected back to the sensor, wherein when the clamping finger does not coincide with the point, the clamping finger is not in engagement with the outer periphery of the compact disc.

20. The method of claim 19, and further comprising moving the tray and the carriage to align the sensor with the point.

21. The method of claim 19, wherein when the surface of a clamping finger does not coincide with the point, the beam of light is emitted into a slot of the tray.

22. A method of operating a compact disc printer, comprising:
 - aligning a sensor with a predetermined first point on a movable tray of the printer, wherein the predetermined first point is at a known first distance from a predetermined second point corresponding to a center of a compact disc when the compact disc is disposed on the tray and wherein the first and second points coincide with a slot in the tray that is substantially parallel to a direction of motion of the tray, the sensor disposed on a carriage of the printer for moving an ink jet cartridge attached thereto across the compact disc to deposit an image on the compact disc;
 - emitting a beam of light from the sensor into the slot at the first point;
 - moving the tray so that the beam of light moves within the slot toward the second point;
 - indicating that no compact disc is present when the beam of light arrives at the second point without being reflected;
 - when a compact disc is located on the tray, reflecting the beam of light back to the sensor from the compact disc when the beam of light encounters an outer periphery of the compact disc; and
 - computing a dimension of the compact disc by subtracting a distance traveled by the tray between the first point and the outer periphery of the compact disc from the first distance.
23. The method of claim 22, and further comprising determining a type of the compact disc from a look-up table based on the dimension of the compact disc.
24. The method of claim 22, and further comprising determining the distance traveled by the tray by counting a number of rotations of a stepper motor that moves the tray.

25. A method of clamping a compact disc to a printer, comprising:
 - positioning the compact disc on a surface of a movable tray of the printer so that a pair of studs protruding from the surface of the tray extend into a hole passing through a center of the compact disc;
 - disposing an adaptor between an outer periphery of the compact disc and at least one clamping finger movably attached to the tray; and
 - moving the at least one clamping finger into engagement with the adaptor so as to push the adaptor into engagement with the periphery so as to push a periphery of the hole passing through the center of the compact disc against the pair of studs.
26. The method of claim 25, and further comprising verifying clamping of the compact disc.
27. The method of claim 26, wherein verifying clamping of the compact disc comprises reflecting a beam of light off a surface of the at least one clamping finger.
28. The method of claim 25, wherein moving at least one clamping finger is in response to moving the tray into the printer.
29. The method of claim 25, wherein moving at least one clamping finger further comprises:
 - moving the tray into the printer;
 - as the tray is moving, engaging a lug protruding from a stationary surface of the printer with an actuator arm connected to a first shaft rotatably attached to

the tray as the tray moves past the lug, wherein the lug rotates the first shaft;
and

imparting the rotation of the first shaft to a second shaft via a link movably
connected between the first shaft and the second shaft, wherein the second
shaft is rotatably attached to the tray and wherein the second shaft is
connected to the at least one clamping finger so that the rotation of the
second shaft rotates the at least one clamping finger.

30. The method of claim 25, and further comprising biasing the at least one finger
against the adaptor during clamping.